

**WEST**

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Aug 22, 2000

DERWENT-ACC-NO: 1994-094229

DERWENT-WEEK: 200052

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TITLE: Prodn of L-aspartic acid without producing by-product -  
comprises treatment of ammonium aspartate with fumaric acid

INVENTOR: BRUN, D; LAHARY, P ; THIERRY, J

PATENT-ASSIGNEE:

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PRIORITY-DATA: 1992FR-0010954 (September 15, 1992)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
CA 2106116 C	August 22, 2000	F	000	C12P013/20
EP 588674 A1	March 23, 1994	F	007	C07C227/18
FR 2695638 A1	March 18, 1994	N/A	011	C07C229/24
CA 2106116 A	March 16, 1994	F	000	C12P013/20
JP 06234713 A	August 23, 1994	N/A	005	C07C229/24
US 5488155 A	January 30, 1996	N/A	004	C07C227/00
JP 2524306 B2	August 14, 1996	N/A	005	C07C229/24
CN 1089937 A	July 27, 1994	N/A	000	C07C229/24
EP 588674 B1	April 23, 1997	F	005	C07C227/18
DE 69310066 E	May 28, 1997	N/A	000	C07C227/18
ES 2104097 T3	October 1, 1997	N/A	000	C07C227/18

DESIGNATED-STATES: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL  
PT SE AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

CITED-DOCUMENTS: EP 110422; GB 2108128 ; US 3933586

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
CA 2106116C	September 14, 1993	1993CA-2106116	N/A
EP 588674A1	August 11, 1993	1993EP-0402040	N/A
FR 2695638A1	September 15, 1992	1992FR-0010954	N/A
CA 2106116A	September 14, 1993	1993CA-2106116	N/A
JP 06234713A	September 6, 1993	1993JP-0243560	N/A
US 5488155A	September 15, 1993	1993US-0120751	Cont of
US 5488155A	June 1, 1995	1995US-0456375	N/A
JP 2524306B2	September 6, 1993	1993JP-0243560	N/A
JP 2524306B2		JP 6234713	Previous Publ.
CN 1089937A	September 14, 1993	1993CN-0117525	N/A
EP 588674B1	August 11, 1993	1993EP-0402040	N/A
DE 69310066E	August 11, 1993	1993DE-0610066	N/A
DE 69310066E	August 11, 1993	1993EP-0402040	N/A
DE 69310066E		EP 588674	Based on
ES 2104097T3	August 11, 1993	1993EP-0402040	N/A
ES 2104097T3		EP 588674	Based on

INT-CL (IPC): C07C 227/00; C07C 227/14; C07C 227/18; C07C 229/24; C12P 13/20

ABSTRACTED-PUB-NO: EP 588674A  
BASIC-ABSTRACT:

Prodn. of L-aspartic acid (I) via NH<sub>4</sub> aspartate (Ia) comprises treating (Ia) with fumaric acid (II) to ppt. (I).

A 10-60% aq. soln. of (Ia) is reacted with (II) at up to 100 deg.C, and the pptd. (I) is isolated by filtration. The (II):(Ia) molar ratio is up to 0.8:1, esp. 0.1-0.65:1. The (Ia)-contg. filtrate is treated with an aspartase or an aspartase-producing microorganism to form (Ia).

ADVANTAGE - Use of (II) eliminates by-product formation, since the co-produced NH<sub>4</sub> fumarate (IIa) can be used to produce more (Ia).

ABSTRACTED-PUB-NO:

EP 588674B

EQUIVALENT-ABSTRACTS:

Process for the preparation of L-aspartic acid by reaction of ammonium aspartate and fumaric acid with precipitation of the L-aspartic acid, characterised in that the precipitation reaction is carried out at a temperature of less than or equal to 100 deg. C, from a heterogeneous solid/liquid mixture, the fumaric acid being employed in an added fumaric acid/ammonium aspartate present molar ratio of between approximately 0.1 and 0.65 and the water concentration of the precipitation mixture being between approximately 40 and 90% by weight, without taking into account the amount of fumaric acid present in the

said mixture.

US 5488155A

A process for the preparation of L-aspartic acid, comprising treating ammonium aspartate with an effective,, aspartic acid-precipitating amount of fumaric acid in a heterogeneous reaction medium having solid fumaric acid present in the reaction medium at the outset of the treatment and at a temperature up to 100deg. C.

CHOSEN-DRAWING: Dwg.0/0 Dwg.0/0 Dwg.0/0

TITLE-TERMS: PRODUCE ASPARTIC ACID PRODUCE BY=PRODUCT COMPRISE  
TREAT AMMONIUM ASPARTATE FUMARIC ACID

DERWENT-CLASS: B05 D16 E16

CPI-CODES: B10-B02J; D05-C01; D05-C03; E10-B02D5;

CHEMICAL-CODES:

Chemical Indexing M2 \*01\*

Fragmentation Code

H1 H100 H181 J0 J012 J1 J172 M280 M312 M321  
M332 M343 M349 M381 M391 M416 M620 M720 M800 M903  
M904 M910 N134 N182 N460 N512 Q233

Specific Compounds

04095P

Registry Numbers

0114P

Chemical Indexing M3 \*01\*

Fragmentation Code

H1 H100 H181 J0 J012 J1 J172 M280 M312 M321  
M332 M343 M349 M381 M391 M416 M620 M720 M800 M903  
M904 M910 N134 N182 N460 N512 Q233

Specific Compounds

04095P

Registry Numbers

0114P

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0114P; 0902S

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1994-043122